

# GEOINFORMATICS

Geoinformatic refer to two words .

**Geo** : Related to Earth.

**Informatics** : the science of the processing of data for storage and Retrieval (بیرتہ تر لاسہ کول)

The art of science and technology dealing with the acquisition (حصول), Storage processing , production , presenting and dissemination (خپرول) of geo data is called geoinformatics.

# GEOINFORMATICS

## **Geoinformatics:**

The three main task of geoinformatics are :

- 1: Develop and management of databases of Geo data.
- 2: Analysis and Modeling of data.
- 3: Develop and integration of Computer Tools and Software for the first two task.

## Cont.....

**It Consists of :**

❖ **Geographical Information System(GIS)**

❖ **Remote Sensing.**

❖ **Global Position System( GPS)**

## Geographical Information System(GIS)

**Geographical Information System(GIS)**

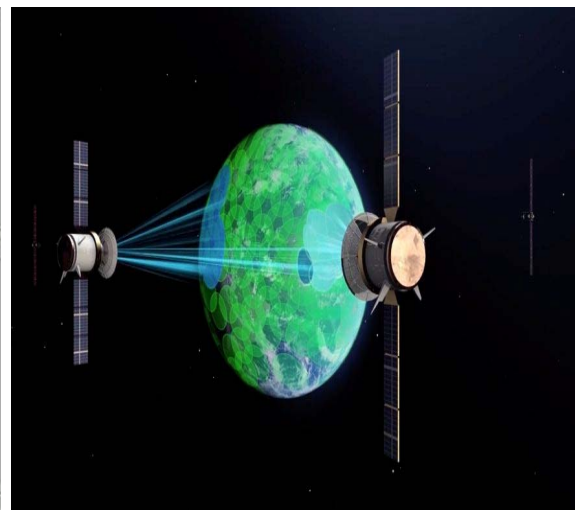
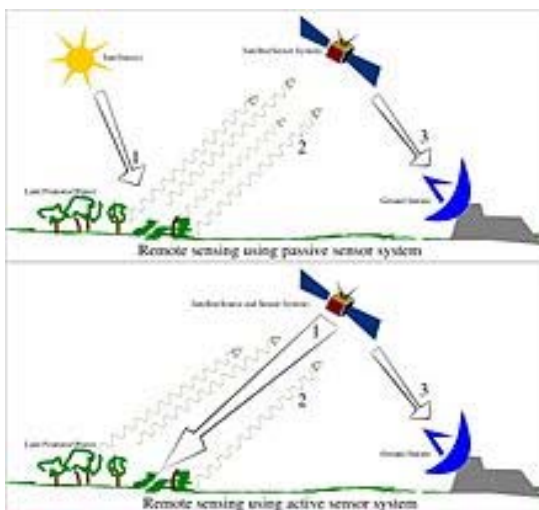
It is an information technology which store , analyses and display data.

## Remote Sensing (RS)

### Remote Sensing:

It is a mean of acquiring (ترلاسه کول) information about a phenomena (پدیده) or Subject surface while at distance from it.

## Remote sensing



## Satellites

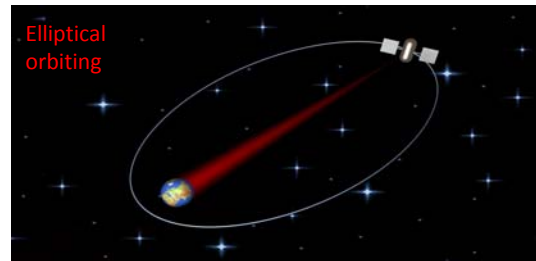
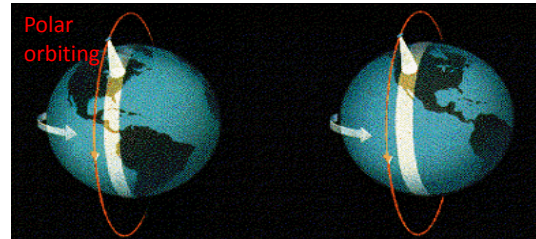
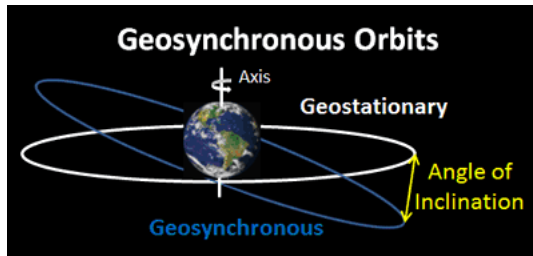
What can satellites do?

- ❖ Satellites any object that orbit around another object.
- ❖ Man made satellites are designed to carry out a wide range of tasks. (دندو پراخه (المري).
- ❖ Take images , relay signal.
- ❖ First introduced over 40 years ago Russian satellites Sputnik.
- ❖ Currently over 8000 satellites orbiting Earth .
- ❖ Most are not much bigger than a ball , but some are the size of small car.

## 4 MAIN TYPE OF SATELLITES

- ❖ Geosynchronous Orbiting : stays over same spot on earth ( rotates at same speed as land under it).
- ❖ Polar orbiting: pole (قطب) to pole orbit.
- ❖ Low earth orbiting very low orbit.
- ❖ Elliptical (بيضوي) orbiting elongated pole to pole orbit

## 4 MAIN TYPE OF SATELLITES



## Global positioning System (GPS)

### Global Positioning system:

It is a system of earth – orbiting satellites transmitting precisely (دقیقاً) timed signal which provides direct measurement of position on the Earth surface and the location is expressed (خرگندول) in Latitude / Longitude.